

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1-16. (Cancelled).

17. (Previously Presented) A communication device for sampling sounds generated by a first person which are non-audible to a second person, comprising:

a microphone; and

a positioning structure coupled to the microphone, the positioning structure positioning the microphone on a surface of skin over a sternocleidomastoid muscle below a mastoid of the first person so as to detect vibrations non-audible to the second person, which are transmitted through flesh of the first person to the sternocleidomastoid muscle and conducted through the skin.

18. (Cancelled).

19. (Previously Presented) A method for detecting sounds generated by a first person which are non-audible to a second person, comprising:

attaching a microphone on a surface of skin over a sternocleidomastoid muscle below a mastoid of the first person; and

generating an electrical signal from the microphone corresponding to vibrations non-audible to the second person, which are generated by the first person, the vibrations being transmitted through flesh of

the first person to the sternocleidomastoid muscle and conducted through the skin.

20. (Previously Presented) The communication device according to claim 17, wherein the sounds include a murmur and a respiratory sound.
21. (New) The microphone according to claim 17, further comprising a diaphragm installed on the surface of the skin and a sucker that sticks to the diaphragm.
22. (New) The microphone according to claim 17 or 21, wherein the microphone is integrated with a head-installed object such as glasses, a headphone, a supra-aural earphone, a cap, or a helmet which is installed on the human head of the first person.
23. (New) A communication interface system comprising:

the microphone according to claim 17; and

a signal processing apparatus that processes a signal sampled through the microphone, wherein a result of processing by the signal processing apparatus is used for communication.
24. (New) The communication interface system according to claim 23, wherein the signal processing apparatus includes an analog digital converting section that quantizes a signal sampled through the microphone, a processor section that processes a result of the quantization by the analog digital converting section, and a transmission section that transmits a result of the processing by the processor section to an external apparatus.

25. (New) The communication interface system according to claim 23, wherein the signal processing apparatus includes an analog digital converting section that quantizes a signal sampled through the microphone and a transmission section that transmits a result of the quantization by the analog digital converting section to an external apparatus and in that the external apparatus processes the result of the quantization.
26. (New) The communication interface system according to claim 24, wherein the signal processing apparatus includes an analog digital converting section that quantizes a signal sampled through the microphone, a processor section that processes a result of the quantization by the analog digital converting section, and a speech recognition section that executes a speech recognition process on a result of the processing by the processor section.
27. (New) The communication interface system according to claim 26, further comprising a transmission section that transmits a result of the speech recognition by the speech recognition section to an external apparatus.
28. (New) The communication interface system according to claim 24, wherein an apparatus in a mobile telephone network executes a speech recognition process on the result of the processing by the processor section, the result being transmitted by the transmitting section.

29. (New) The communication interface system according to claim 24, wherein the signal processing executed by the signal processing apparatus is a modulating process in which the process section modulates the signal into sound audible to the second person.
30. (New) The communication interface system according to claim 29, wherein the modulating process applies a fundamental frequency of vocal cords to the sounds to convert the sounds into sounds as produced by regular vibration of vocal cords, the converted sounds being audible to the second person.
31. (New) The communication interface system according to claim 29, wherein the modulating process converts a spectrum of the sounds not involving regular vibration of vocal cords into a spectrum of sound as produced by regular vibration of the vocal cords, the converted sounds being audible to the second person.
32. (New) The communication interface system according to claim 31, wherein the modulating process uses the spectrum of the sounds and a speech recognition apparatus to recognize phonetic units such as syllables, semi-syllables, phonemes, two-juncture phonemes, and three-juncture phonemes and uses a speech synthesis technique to convert the recognized phonetic units into sounds as produced by regular vibration of the vocal cords, the sounds being audible to the second person.

33. (New) The communication interface system according to any one of claims 23 to 32, wherein an input gain is controlled in accordance with a magnitude of a dynamic range of a sound sampled through the microphone.
34. (New) The communication interface system according to claim 26 or 27, wherein the speech recognition section appropriately executes speech recognition utilizing an acoustic model of at least one of the sounds non-audible to the second person, a whisper which is audible but is uttered without regularly vibrating vocal cords, a sound uttered by regularly vibrating the vocal cords and including a low voice or a murmur, and various sounds such as a teeth gnashing sound and a tongue clucking sound.
35. (New) A signal processing apparatus that processes a signal sampled through the microphone according to claim 17.